Correspondence

The Editorial Board will be pleased to receive and consider for publication correspondence containing information of interest to physicians or commenting on issues of the day. Letters ordinarily should not exceed 600 words, and must be typewritten, double-spaced and submitted in duplicate (the original typescript and one copy). Authors will be given an opportunity to review any substantial editing or abridgement before publication.

Differential Diagnosis of Pleural Effusions

TO THE EDITOR: The journal continues to publish very stimulating material. In one excellent recent article, Sahn discussed the enormous amount of information that can be gleaned from the analysis of pleural fluid.[1] He, however, did not consider an important test that occasionally provides the only clue to the diagnosis of malignant disease of the pleura: cytogenetic analysis of the cells in the pleural fluid. We believe that this test is important and deserves comment.

Malignant disease involving the pleura produces a variety of chromosomal abnormalities in the cells of the pleural effusion. Among these, hyperdiploidy and the presence of abnormal marker chromosomes have been suggested as useful criteria for the diagnosis of malignancy.[2] In one series,[2] routine cytologic examination could identify 65 percent of malignant effusions whereas cytogenetic analysis correctly diagnosed around 70 percent of such effusions. The difference between these figures was not statistically significant. However, when the results of the two tests were analyzed together, 83 percent of malignant effusions could be correctly identified, a result that was superior to either test done alone. Interestingly, cytogenetic analysis correctly identified more than 85 percent of lymphoma and leukemia involving the pleura, while cytologic examination could show only about 30 percent, a significant difference.

What is important about chromosomal analysis of pleural fluid is that it may be the only positive feature in an otherwise negative battery of tests done on the pleural fluid. Dewald and associates described three of several such patients in whom the typical chromosomal changes of malignancy were the only positive findings.[2] These patients subsequently manifested overt malignant disease; in one of the patients malignant mesothelioma developed six months later. Cytogenetic examination may therefore provide an early clue to the diagnosis of malignant disease of the pleura. Furthermore, it is inexpensive,[3] easily performed in any genetic diagnostic laboratory[2] and can provide a diagnosis as early as five hours after the pleural tap.[2] In view of these advantages and in order to ensure that physicians consider chromosomal analysis of pleural fluid, it must be included among the routine tests done to ascertain the etiology of pleural effusions.

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2. Dewald G, Dines DE, Weiland LH, et al: Usefulness of chromosome examination in the diagnosis of malignant pleural effusions. N Engl J Med 1976; 295:1494-1500
3. Goodlin RC: Utilization of cell chromosome number for diagnosing cancer cells in effusion. Nature 1963; 197:507

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TO THE EDITOR: Dr. Sahn has written an informative and almost comprehensive article on the differential diagnosis of pleural effusions, which was published in the August 1982 issue.[1] No article on this subject is complete, however, without at least mention of two additional diagnostic techniques, thoracoscopy and open pleural biopsy. We have found these procedures to be most useful in establishing the diagnosis of a malignant pleural effusion when cytology of the pleural fluid has been negative and when needle biopsy of the pleura has been negative as well. Sahn points out that pleural fluid cytology is positive in "approximately 50 percent to 70 percent of patients" and "the yield of repeat cytology in carcinoma of the pleura is 17 percent to 22 percent." He goes on to say that "carcinoma may be diagnosed on pleural biopsy in approximately 60 percent of cases of carcinoma of the pleura." A number of patients remain who have pleural malig-

nancies which have not been diagnosed by these relatively simple techniques.[2]

In such instances our next step would be thoracoscopy, a procedure which is done under general anesthesia but which results in little risk or discomfort for the patient.[3] We use a double-lumen endotracheal tube for administering anesthesia in order to allow for collapse of the lung on the involved side thereby enabling the surgeon to get a thorough look at the pleural cavity. Biopsy is then performed under direct vision, and with safety. Using this technique we have been able to diagnose accurately all pleural effusions due to carcinoma in which pleural fluid cytology and pleural biopsy have been negative.

In some cases of nonmalignant pleural disease, and especially in patients with malignant mesothelioma, open pleural biopsy through a limited thoracotomy incision has been necessary to establish the diagnosis. The diagnosis of malignant mesothelioma is occasionally very difficult to establish short of providing the pathologist with a generous pleural biopsy specimen. When either of these techniques is used tetracycline can be instilled into the pleural cavity at the time of the procedure when the diagnosis of malignancy has been established thereby saving the patient the discomfort of this instillation at a different time.

Dr. Sahn is well-known for his expertise in pleural physiology and his article in the August issue is an excellent one. I mention these two invasive procedures only for the sake of completeness because I believe, as I am certain Dr. Sahn does, that the cause of a pleural effusion should be established with certainty whenever possible.

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2. Memon A, Zawadzki Z: Malignant effusions: Diagnostic Evaluation and Therapeutic Strategy. Chicago, Year Book Medical Publishers, Inc, 1981
3. Weissberg D, Kaufman M: Diagnostic and therapeutic pleuroscopy: Experience with 127 patients. Chest 1980 Nov; 78: 732-735

AMA and a National Health Policy

TO THE EDITOR: I enjoyed reading your editorial[1] in the August 1982 issue about the project "Health Policy Agenda for the American People." As Chairman of the Steering Committee of this AMA-initiated project, I am pleased with the number of articles and letters supporting the Health Policy Agenda.

However, there is one item in the editorial that I wish to correct. After the draft proposal was presented to the AMA House of Delegates in June 1982, the Steering Committee approved the addition of representatives from the Department of Health and Human Services, the Department of Defense and the Veterans Administration on the Steering Committee and on certain work groups. The National Conference of State Legislatures and the National Governors' Association are represented on the Advisory Committee.

Your editorial was excellent and thank you again for the support of this important project.

JOSEPH F. BOYLE, MD
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Health Policy Agenda Steering Committee

REFERENCE

1. AMA and a national health policy, The (Editorial). West J Med 1982 Aug; 137:126-127

Ascaris Infection in Washington State

TO THE EDITOR: Pig manure, used as a fertilizer for vegetable gardens, is becoming increasingly popular among organic gardeners in Washington state. This popularity has resulted in large part from the increased price and decreased availability of cow manure. However, recent reports of *Ascaris* transmission from pigs to humans suggest that this practice may increase the risk of *Ascaris* infection.[1,2] To investigate the association of exposure to pigs or pig manure with infection, a survey of Washington state residents with laboratory confirmed *Ascaris* infection was conducted.

Over an 18-month period from January 1981 through June 1982, there were 328 cases of *Ascaris* infection identified by the Washington State Public Health Laboratory. Of these, 71 percent occurred either in Asian refugees or other recently arrived aliens, 22 percent in migrant farm workers and 8 percent (25 people) in US citizens who were not farm workers.

The survey was limited to 23 people who were US citizens and had resided in Washington state for one year before diagnosis. Of the 23 people, 18 reported extended exposure to pigs (pigs, pig manure or old pig sties). Five of the people reported out-of-state travel; however, three of these also reported exposure to pigs in Washington state. One of the five traveled to Central America. There were 14 of the 23 people (61 percent) under 4